

Appl. No. 10/605,416
Amtd. dated May 02, 2005
Reply to Office action of April 12, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 5 Claim 1 (currently amended): A liquid crystal display comprising:
a lower substrate;
an upper substrate positioned parallel with the lower substrate; and
a plurality of pixel units, each of the pixel units including an upper transparent
electrode, a liquid crystal layer, a lower transparent electrode, and a color filter covered
10 with one of the upper and the lower transparent electrode directly;
wherein a surface of each color filter has a plurality of recess structures.

Claim 2 (original): The liquid crystal display of claim 1 wherein a distribution density
of the recess structures is used to regulate brightness and a color deepness of the liquid
15 crystal display.

Claim 3 (original): The liquid crystal display of claim 1 wherein each of the pixel
units respectively comprises a reflection layer positioned between the color filter and the
lower substrate.
20

Claim 4 (original): The liquid crystal display of claim 3 being a reflective liquid
crystal display.

Claim 5 (original): The liquid crystal display of claim 3 wherein each of the reflection
25 layers includes an opening.

Claim 6 (original): The liquid crystal display of claim 5 being a semi-transmissive
and semi-reflective liquid crystal display.

Appl. No. 10/605,416
Amdt. dated May 02, 2005
Reply to Office action of April 12, 2005

Claim 7 (original): The liquid crystal display of claim 1 further comprising a plurality of thin film transistors for respectively controlling each of the pixel units.

- 5 Claim 8 (currently amended): A liquid crystal display comprising:
a lower substrate;
an upper substrate positioned parallel with the lower substrate; and
a plurality of pixel units, each of the pixel units including an upper transparent electrode, a liquid crystal layer, a lower transparent electrode, and a color filter covered
10 with one of the upper and the lower transparent electrode directly;
wherein each of the color filters includes both a first region and a second region, and a surface of the first region has a plurality of recess structures.

- Claim 9 (original): The liquid crystal display of claim 8 wherein an area of the first
15 region of the color filter is used to regulate brightness and a color deepness of the liquid crystal display.

- Claim 10 (original): The liquid crystal display of claim 8 wherein a distribution
density of the recess structures is used to regulate brightness and a color deepness of the
20 liquid crystal display.

- Claim 11 (original): The liquid crystal display of claim 8 wherein each of the pixel
units respectively comprises a reflection layer positioned between the color filter and the
lower substrate.

25

- Claim 12 (original): The liquid crystal display of claim 11 being a reflective liquid
crystal display.

Appl. No. 10/605,416
Amdt. dated May 02, 2005
Reply to Office action of April 12, 2005

Claim 13 (original): The liquid crystal display of claim 11 wherein each of the reflection layers respectively includes an opening opposite to the second region of each color filter.

- 5 Claim 14 (original): The liquid crystal display of claim 13 being a semi-transmissive and semi-reflective liquid crystal display.

Claim 15 (original): The liquid crystal display of claim 8 further comprising a plurality of thin film transistors for respectively controlling each of the pixel units.

10

Claim 16 (new): The liquid crystal display of claim 1 wherein the plurality of recess structures comprises a plurality of valley structures.

- 15 Claim 17 (new): The liquid crystal display of claim 1 wherein the surface of each color filter has the plurality of recess structures is able to scatter light.

Claim 18(new): The liquid crystal display of claim 8 wherein the plurality of recess structures comprises a plurality of valley structures.

- 20 Claim 19 (new): The liquid crystal display of claim 8 wherein the surface of the first region has the plurality of recess structures is able to scatter light.

Claim 20 (new): A liquid crystal display comprising:

- 25 a lower substrate;
an upper substrate positioned parallel with the lower substrate; and
a plurality of pixel units, each of the pixel units including an upper transparent electrode, a liquid crystal layer, a lower transparent electrode, and a color filter formed on the upper substrate and above the lower substrate;

Appl. No. 10/605,416
Amtd. dated May 02, 2005
Reply to Office action of April 12, 2005

wherein a surface of each color filter has a plurality of convex structures.

Claim 21 (new): The liquid crystal display of claim 20 wherein the color filter is covered with the upper transparent electrode directly.

5

Claim 22 (new): The liquid crystal display of claim 20 wherein the surface of each color filter has the plurality of convex structures is able to scatter light.

10 Claim 23 (new): The liquid crystal display of claim 20 wherein a distribution density of the convex structures is used to regulate brightness and a color deepness of the liquid crystal display.

15 Claim 24 (new): The liquid crystal display of claim 20 wherein each of the pixel units respectively comprises a reflection layer positioned between the color filter and the lower substrate.

Claim 25 (new): The liquid crystal display of claim 24 being a reflective liquid crystal display.

20 Claim 26 (new): The liquid crystal display of claim 24 wherein each of the reflection layers includes an opening.

Claim 27 (new): The liquid crystal display of claim 26 being a semi-transmissive and semi-reflective liquid crystal display.

25

Claim 28 (new): The liquid crystal display of claim 20 further comprising a plurality of thin film transistors for respectively controlling each of the pixel units.

Appl. No. 10/605,416
Amdt. dated May 02, 2005
Reply to Office action of April 12, 2005

Claim 29 (new): The liquid crystal display of claim 28 wherein the thin film transistors is formed on the lower substrate and below the upper substrate.